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<b>Author Type</b>	<input checked="" type="radio"/> contributor <input type="radio"/> main author <input checked="" type="radio"/> corresponding author		
<b>First Name</b>	Aditya Halim Perdana Kusuma	<b>Last Name</b>	Putra
<b>Position</b>	Universitas Muslim Indonesia	<b>Position(ENG)</b>	
<b>Department</b>	Management	<b>Department(ENG)</b>	
<b>Position Type</b>	University	<b>Country</b>	Indonesia
<b>Location</b>	Foreign	<b>Zip-Code</b>	
<b>Address</b>			
<b>Phone No.</b>		<b>Cell Phone No.</b>	+62-0813-4217-6601
<b>E-mail</b>	adityatrojhan@gmail.com	<b>Fax</b>	

<b>Author Type</b>	<input checked="" type="radio"/> main author <input type="radio"/> corresponding author		
<b>First Name</b>	Razak	<b>Last Name</b>	Mashur
<b>Position</b>	STMIK Handayani	<b>Position(ENG)</b>	
<b>Department</b>	Management	<b>Department(ENG)</b>	
<b>Position Type</b>	University	<b>Country</b>	Indonesia
<b>Location</b>	Metropolitan Area	<b>Zip-Code</b>	
<b>Address</b>			
<b>Phone No.</b>		<b>Cell Phone No.</b>	
<b>E-mail</b>		<b>Fax</b>	


<b>Author Type</b>	<input type="radio"/> main author <input type="radio"/> corresponding author		
<b>First Name</b>	Fitriany	<b>Last Name</b>	Fitriany
<b>Position</b>	STIE Nobel Indonesia	<b>Position(ENG)</b>	
<b>Department</b>	Management	<b>Department(ENG)</b>	
<b>Position Type</b>	University	<b>Country</b>	Indonesia

<b>Location</b>	Metropolitan Area	<b>Zip-Code</b>	
<b>Address</b>			
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<b>Author Type</b>	<input type="radio"/> main author <input type="radio"/> corresponding author		
<b>First Name</b>	Bata Ilyas	<b>Last Name</b>	Gunawan
<b>Position</b>	STIE AMKOP	<b>Position(ENG)</b>	
<b>Department</b>	Management	<b>Department(ENG)</b>	
<b>Position Type</b>	University	<b>Country</b>	Indonesia
<b>Location</b>	Metropolitan Area	<b>Zip-Code</b>	
<b>Address</b>			
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<b>E-mail</b>	<b>Fax</b>		

<b>Author Type</b>	<input type="radio"/> main author <input type="radio"/> corresponding author		
<b>First Name</b>	Muhammad	<b>Last Name</b>	Hidayat
<b>Position</b>	STIE Nobel Indonesia	<b>Position(ENG)</b>	
<b>Department</b>	Management	<b>Department(ENG)</b>	
<b>Position Type</b>	University	<b>Country</b>	Indonesia
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<b>E-mail</b>	<b>Fax</b>		

<b>Author Type</b>	<input type="radio"/> main author <input type="radio"/> corresponding author		
<b>First Name</b>	Muhammad	<b>Last Name</b>	Ashoer
<b>Position</b>	Universitas Muslim Indonesia	<b>Position(ENG)</b>	
<b>Department</b>	Management	<b>Department(ENG)</b>	
<b>Position Type</b>	University	<b>Country</b>	Indonesia

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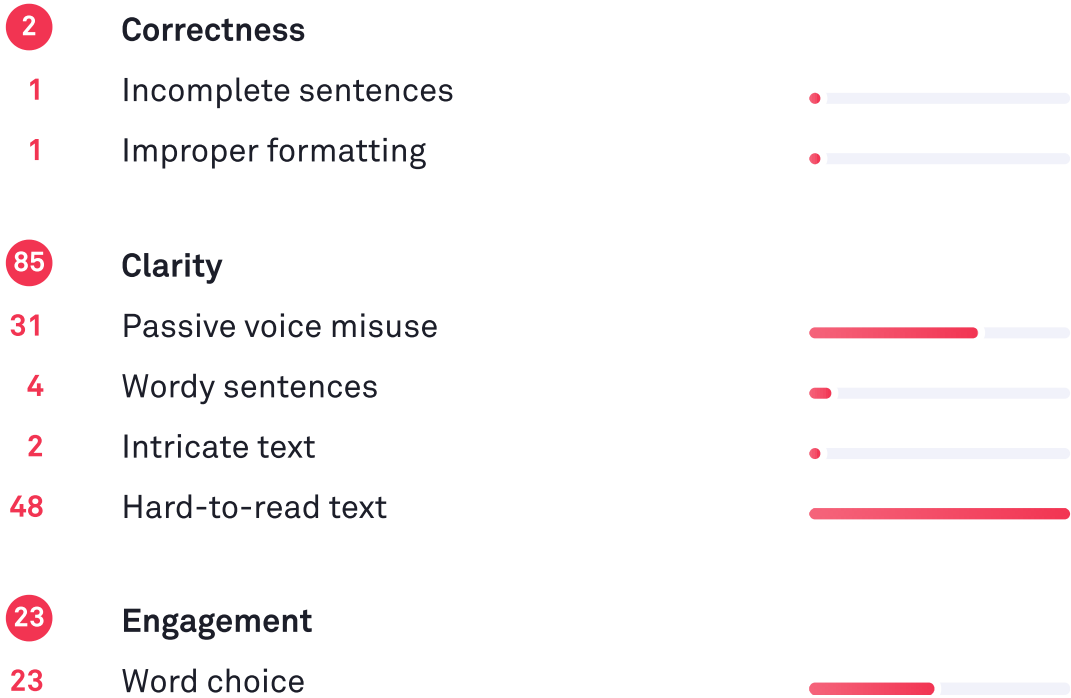
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# ENG\_Proof\_Trans\_Moving From Traditional to Society 5.0 Enhancing Consumer Transportation Pleasure by Implication of Techn

Moving From Traditional to Society 5.0: Enhancing Consumer Transportation Pleasure by Implication of Technology

Mashur Razak<sup>1</sup>, Gunawan Bata Ilyas<sup>2</sup>, Muhammad Hidayat<sup>3</sup>, Muhammad Ashoer<sup>4</sup>, Fitriany<sup>5</sup>, Aditya Halim Perdana Kusuma Putra<sup>6</sup>

STMIK Handayani Makassar<sup>1</sup>, STIE AMKOP Makassar<sup>2</sup>, STIE Nobel Indonesia<sup>3,5</sup>, Faculty of Economics, Department of Management, Universitas Muslim Indonesia<sup>4,6</sup>

\*Corresponding author : (adityatrojhan@gmail.com )\*

## Abstract

Purpose: Capturing the shifting consumer behaviour perspective on online transportation network performance in Indonesia, this study aims to empirically examine the impact of electronic customer relationship management (e-CRM) and e-service quality on customer e-satisfaction and e-loyalty.<sup>1</sup>

Research Design and Methodology: A quantitative approach was applied, and then we determined the respondents who met the predetermined criterion by using purposive sampling method. In total, 167 online transportation customer in Indonesia participated in this electronic questionnaire survey. To tested the collected data, Partial Least Square (PLS) - Structural Equation Model (SEM) analytical tools were employed.

Result and Findings: There are five hypotheses proposed in this study and state that only 1 hypothesis is rejected,<sup>2</sup> The dominant relationship between variables in the hypothesis is shown in the variable relationship of e-service quality on e-satisfaction.<sup>3</sup> The findings of this research provide both managerial and<sup>4</sup> theoretical implications to maintain customer e-loyalty in online transportation network business environment in Indonesia.<sup>5</sup><sup>6</sup>

Keywords: e-CRM, e-Service quality, e-satisfaction, e-loyalty, Online Transportation business

JEL Classification Code: M0, M2, M31

## Introduction

The concept of society 5.0 has been explained by Salgues, (2018) And is becoming a hot conversation in the world, where society 5.0 definitively echoes the integration between social of intelligence, physical space and cyberspace (internet).<sup>7</sup> The concept of society 5.0 combines the history of human civilization, starting from the hunter-gatherer society, the agricultural society, industrial society and information society.<sup>8</sup> Society 5.0 is also very closely related to the completion of social work that is dominant, involving more sophisticated technology.<sup>9</sup> Like today, one of the shifts in the era of transportation that was once accessible through conventional ordering, then with the help of the role of information technology, it is enough to do it through the reach of internet access on smartphone devices.<sup>10</sup> Changes in the times that have given birth to the concept of 5.0 are not without purpose. In the past (society 1.0 - 4.0) leaving many complicated cases that were identical such as<sup>11</sup>

the use of energy, the need for food, international competition as well as increasingly complex equality and justice gave birth to the concept of society 5.0 which was considered as an alternative solution to achieve peak efficiency and effectiveness, mobility in an integrated, complex and privacy-protecting manner.<sup>12</sup> Steady away from the development of information technology, the internet in the grip, the prevalence of knowledge and use of technology as if making the world feel no longer has limits. One of the effects of technology is the birth of e-commerce which also inspired many innovative people to be more creative to create a more private world not only allowing everyone to connect with anyone in the world ie, Social Media, Social Chatting apps, and even inspiring certain parties to develop smart-transportation ie, Uber, Grab and even GoJek (Indonesia's online transportation application).<sup>13</sup> Society 5.0 is tight and thick with the concept of IoT (internet of things) where sharing-knowledge is assured to be accessible to anyone to create new, even unlimited size and value, and the replacement of physical materials into evidence in the form of digital to reduce capacity and also space style society 1.0 - 4.0.<sup>14</sup> Not only is the presence of robots, but artificial intelligence, cloud computing will also be a common sight for the future. The new round of human beings who are friends with machines as presented in various Sci-Fi films does not seem to be a delusion in the future, today we can witness that were little by little work is being taken over by machines and half the world is also present our grip (smartphone).<sup>15</sup>

Entering the new phase of life in Society 5.0, the growth of the internet gave rise to a variety of-based companies online, the impact of which was seen in the increasingly competitive business competition map e-commerce, one of which was marked by the presence of services online transportation based mobile application.<sup>16</sup> This business is proliferating and allows consumers to be

able to order products and services quickly and easily through their smartphone (Wallsten, 2015). The application also offers a variety of competitive advantages and added value in bringing drivers and customers together when compared to conventional transportation (Semchugova et al., 2017). Another benefit that is also felt is that the driver and customer can know the location of each other accurately through the help of Google Maps, customers can also find out information about driver and vehicle data, and customers can easily find transportation to go to the desired place (time efficiency) (Silalahi, Handayani, & Munajat, 2017).<sup>18</sup> These various benefits make mobile services increasingly popular, especially among urban communities. This sector is also increasingly promising, along with the growth in the number of smartphone users in Indonesia. Which has penetrated 130 million users with a penetration of 48% This figure also places Indonesia as the third-largest smartphone user in the Asia Pacific after China and India (www.wearesocial.com, 2019).

The above phenomenon shows that online transportation services have been in the minds of customers and gradually become a substitute for conventional transportation. With the increasingly massive online transportation,<sup>20</sup> various aspects that can support survival and company success are crucial to be studied<sup>21</sup> in depth. Customer relationship management (CRM), which in this study was changed<sup>22</sup> to electronic CRM (e-CRM), is one of the essential constructs in e-commerce. The adoption of e-CRM has become the primary strategy recently in most companies e-commerce, especially developing countries, and, therefore, managers are willing to emphasize the development and maintenance of decent relationships with customers that provide sustainable benefits (Harrigan et al., 2015).<sup>23</sup> Some researchers like Zeynep Ata & Toker (2012); and (Mang'unyi & Khabala, 2017) Has suggested that many

business benefits derived from implementing e-CRM, especially increasing customer satisfaction and loyalty. Other studies from Some researchers like Abdulfattah (2012); (Rahimiparvar, 2014) explain the use of e-CRM in establishing customer relationship sets proven to affect online customer satisfaction as well as service quality and retention (Khalifa & Shen, 2009), (Wang & Li, 2006) also, promoting the development of attractive virtual communities and increasing customer satisfaction (Alim & Ozuem, 2014).<sup>24</sup> Lee-Kelley, Gilbert, & Mannicom (2003) Also identifies the antecedents of e-CRM against e-loyalty in the financial services industry. Unfortunately, the e-CRM study above has not focused on the study e-commerce of mobile application-based online transportation services so that it requires the development of a more in-depth study.

The literature also notes that e-service quality plays a crucial role in creating business strategies e-commerce, mainly based on mobile applications. Zeithaml, Parasuraman, & Malhotra, (2002), (Haming et al., 2019) and (Silalahi et al., 2017) agree that the quality of electronic services is an essential point in creating competitive advantage and long-term retention for fully operational companies online. Various dimensions have been proposed; for example, Yoo & Donthu, (2002) develop the SITEQUAL model and validate strict psychometric instruments to measure the perceived quality of internet shopping sites.<sup>25</sup> As well as, Barnes & Vidgen (2002) proposed a WebQual 4.0 model in measuring the quality of electronic service for bookstore websites, and e-SERVQUAL dimensions by Zeithaml, Parasuraman, & Malhotra, (2002) become the most used model by researchers.<sup>26</sup> In Indonesia, the issue that arises from online transportation services has attracted the attention of researchers, for example, Santoso & Aprianingsih (2017) Which analyzes the quality of electronic services on Go-Ride as part of the GoJek application on Java, Indonesia.<sup>27</sup> Although this<sup>28</sup>

111 | study was successful in revealing the relationship between perceptions of service quality and electronic service quality on customer satisfaction and repurchase intentions, the results of this study were not sufficient in expressing the overall quality of electronic services to the features of mobile applications that made customers reuse the application comprehensively because the focus location is only in one of the services in the Go-Ride application<sup>29</sup> . Besides, the generalization of research results is minimal. That is because the respondents involved in this study were mostly students. Previously, the discussion of the quality of electronic services has been discussed extensively in the context of websites such as (Yoo & Donthu, 2002), (Barnes & Vidgen, 2002), (Zeithaml et al., 2002), (Tsang, Lee, Wong, & Chong, 2012), (Haming et al., 2019) and (Yang & Shim, 2018). Referring to the explanation of the previous research above, the discussion of e-CRM and e-service quality is still dominant in the context of the website and also the lack of studies focusing on transportation online -based mobile application.

112 | Therefore, this study aims to analyze the effect of the application<sup>30 31</sup> of e-CRM and e-service quality on satisfaction and loyalty in online transportation service mobile applications in Indonesia. Objectively the results of this study will be beneficial for the development of the online transportation industry and academic enrichment, especially for the marketing management strategy. For the transportation industry, outlining the constructs of e-CRM and the quality of electronic services on mobile applications can help online transportation companies capture customer perceptions and expectations. Then, this will provide insight for companies in developing the right features and benefits continuously on mobile applications to satisfy their customers. For academic purposes, this research will contribute to the development of the construct of e-CRM and the quality of electronic services related to mobile

applications. Also, it can be a reference material for the development of further knowledge that will research in the field of e-commerce.

## Literature Review and Conceptual Development

### E-CRM

E-CRM is defined as the advantage of marketing and technology-centred services, combining traditional customer relationship management (CRM) tactics and e-business market application applications used by organizations to maintain customer relations (Dubihlela & Molise-Khosa, 2014), (Harrigan, Ramsey, & Ibbotson, 2012), (Mang'unyi & Khabala, 2017).<sup>34</sup> The internet uses web-based technology to attract new customers, analyze their preferences and behaviour, adjust support services and improve service and value benefits, retain customers, and craft tactics to encourage loyalty (Zeynep Ata & Toker, 2012).<sup>35</sup> In essence, e-CRM is used to interact with customers electronically (Lau et al., 2013), (Tauni et al., 2014). Internet and web technology to facilitate the implementation of e-CRM because they interact between institutions and their customers. Therefore, the features that makeup e-CRM remain necessary for managing online customer relations and building and maintaining loyalty. Feinberg & Kadam (2002) States that there are three features in e-CRM: pre-transactions, during transactions and post-transactions, encountered by customers during the purchase of services, at the time of purchase,<sup>36</sup> and after purchase. The transaction cycle strengthens the three-stage relationship while increasing overall customer satisfaction and loyalty. Pre-transaction features include the ability to enter, customize and personalize information, and information search capabilities, including some items, for example, site customization, local search engines, and chat at the pre-purchase stage will

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lead to customer satisfaction, trust and retention (Tian & Wang, 2017).<sup>37</sup>  
Furthermore,<sup>38</sup> various e-CRM features during the transaction process can influence customer decisions to complete online transactions. The level of customer knowledge and experience will be fundamental at this stage where it includes the guidance provided on procedures for buying services or products, criteria that must be considered,<sup>39</sup> and how to evaluate their purchases.<sup>40</sup> At this stage, service suppliers and customers agree to the conditions of their transactions based on their negotiations. The last stage<sup>41</sup> is a post-transaction feature consisting of general questions (FAQ), problem-solving and online feedback (Russell et al., 2018), which requires customer service.

### E-Service Quality

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E-service quality is defined as the extent to which a website facilitates efficient and effective shopping, purchasing and shipping activities (Zeithaml et al., 2002). Yoon C. Cho (2015) explained that the quality of electronic services is the evaluation and overall assessment of customers regarding the advantages and quality of electronic service delivery in the virtual market.<sup>42</sup> Then, Hwang & Kim (2018) States that the quality of electronic services is increasingly recognized<sup>43</sup> as an essential and critical aspect in determining competitive advantage and factors in long-term retention of companies operating online.<sup>44</sup> At least there are two perspectives in determining<sup>45</sup> service quality. The first perspective states that service quality is a comparison between customer expectations and customer perceptions of experienced services (Hemalatha, Dumpala, & Balakrishna, 2018), (Haming et al., 2019). The second perspective argues that service quality is only measured by what customers feel. Based on the first perspective, Parasuraman, Zeithaml, & Berry (1994) developing the SERVQUAL scale, which is one of the most influential studies in service quality. Awasthi,



Chauhan, Omrani, & Panahi (2011) and (Haming et al., 2019) explained that there are five (5) dimensions of service quality in SERVQUAL namely Tangibles, Reliability, Responsiveness, Assurance, and Empathy. Parasuraman, Zeithaml, & Malhotra (2005) then develop ES-QUAL to measure the quality of electronic services (electronic services) delivered through the website. ES-QUAL also includes technical aspects such as efficiency, fulfilment, system availability, ease of use, search speed, privacy and security issues. Zeithaml et al., (2002) Classify all seven dimensions of E-ServQual into four core dimensions customers use to assess website a where they do not have any questions or problems are (1) Efficiency, simplicity and speed of accessing and using the site; (2) Fulfilment, the extent to which the site promises regarding the availability of orders and availability of items are fulfilled; (3) System availability, correct technical functions of the site; (4) Privacy, the extent to which the site is safe and protects user information. Moreover, the three dimensions that customers use to assess recovery services when they have a problem or question are (5) Responsiveness, effective problem handling and returns through the site. (6) Compensation, the degree to which the site compensates customers for problems. (7) Contact, availability of assistance via telephone or representative online.

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#### e-Satisfaction dan e-Loyalty

Anderson & Srinivasan (2003) e-satisfaction is described as a gratuity from customers that comes from previous real purchasing experience with individual electronic trading companies. This can be related to customer emotions, such as feeling happy. Satisfaction, trust, return visit intention, repurchase intention, and loyalty have all been outlined as a result of positive customer experience (Randall et al., 2017) and (Haming et al., 2019). Ranjbarian et al.,

(2012) Classify 5 (five) main dimensions that influence e-satisfaction, namely; Convenience, Merchandising, more valuable information (broader and higher quality) are available online to produce better purchasing decisions and higher levels of e-satisfaction, Site design, Security and Serviceability.<sup>52</sup> Loyalty is basically built by consumer experience.<sup>53</sup> Oliver (1999) define customer loyalty as a firm commitment to buy back preferred products or services consistently in the future, causing the same brand to repeat or purchase the same brand, regardless of situational influences and marketing efforts.<sup>54</sup> Kotler (2012) showing loyalty behaviour can influences business growth, and the company gets to profit from premium prices, references, increases purchases and higher balances, reduces operating costs and customer acquisition costs.<sup>55</sup> Menurut Anderson & Srinivasan (2003) Loyalty in online behaviour is an attitude that benefits customers and their commitment to online companies that result in repurchase behaviour. Loyal customers are customers who are committed and bound to retailers and are not easily bothered by more attractive alternatives (Putra, Said, & Hasan, 2017). The advent of new technology has caused a shift from CRM to e-CRM, and with the increasing global penetration of the internet, e-CRM has become a more accessible communication tool and relationship-building platform.<sup>56</sup> Mang'unyi & Khabala (2017) Postulate that e-CRM infrastructure provides valuable customer support to remain loyal because the information stored in the e-CRM database helps organizations to see actual costs to attract and retain customers.<sup>57</sup> Companies can also access new international customers and seize valuable data that is important for the competitiveness and market share of the company. Harrigan et al. (2015) Explaining the relationship between e-CRM and customer loyalty means that more satisfied customers buyback and spread positive things about positive service. Thus, loyalty<sup>58</sup> will continue to play an essential role in the

competitiveness and profitability of the organization. Apart from that, some researchers, i.e., (Gorondutse, Hilman, & Nasidi, 2014; Hayes, 2008; Khan & Fasih, 2014) which has suggested that e-CRM impacts loyalty.

Alhaiou (2011) explains the relationship between e-CRM features and e-loyalty to online buyers at various stages of the transaction cycle argues that the use of e-CRM in building customer relations affects the satisfaction and loyalty of online consumers.

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<sup>59</sup> Research similar to that, Abdulfattah (2012) investigate the effects of various e-CRM features at various stages of the transaction cycle, on customer satisfaction on the bank's website. The researcher also determined that e-CRM affects customer relations and increases online customer satisfaction and service quality. Rabbai (2013) confirm the effect of e-CRM on customer loyalty. Meanwhile, Alim dan Ozuem (2014) concluded that e-CRM was effective in strengthening relationships with customers and promoting the development of attractive virtual communities, which further increased satisfaction. Other studies as stated by (Abdulfattah, 2012), (Rahimiparvar, 2014) regarding the use of e-CRM in building customer relationships establishes that it affects online customer satisfaction, service quality and retention (Tian & Wang, 2017) moreover, promoting the development of attractive virtual communities that further enhance satisfaction. <sup>60</sup> Based on the explanation, the hypothesis <sup>61</sup> is stated as follows:

H1: e-CRM influences e-satisfaction

H2: e-CRM influences e-loyalty

E-Service quality is a combination of quality internet-based services. Where customers will feel more efficient in carrying out transactions in terms of time and cost, as well as the availability of information and smooth transactions <sup>62</sup> become the choice of customers to transact through the availability of

adequate system facilities and internet network and guaranteed confidentiality  
of customer data.<sup>63</sup> Thus e-service quality provided by the company will satisfy  
or not satisfy the customer because the quality of service provided<sup>64</sup> by the  
company influences the level of customer satisfaction. The previous research  
by Zhao, Lu, Zhang, & Chau, (2012) States that there is a positive relationship  
between e-service quality, e-satisfaction and e-loyalty. Perfect e-Service  
quality will be the basis of customer satisfaction in the scope of e-commerce  
(e-satisfaction). Based on the explanation above, the hypothesis is proposed<sup>65</sup>  
as follows:

H3: e-Service Quality influences e-Satisfaction

H4: e-Service Quality influence e-loyalty

After consuming the product were they buy, the consumer will feel satisfied or  
dissatisfied depending on the quality of service received from the company  
where the customer will evaluate after consuming the product or service.<sup>66</sup>

Furthermore, customers will be satisfied(satisfaction)or  
dissatisfied(dissatisfaction)to the consumption of products or services that  
have been done.<sup>67</sup> If the customer feels satisfied, it will encourage the customer  
to buy and re-consume the product and vice versa. In many studies explain that  
there is a positive relationship between e-satisfaction and e-loyalty, which  
means that the high and low of e-loyalty is also determined by e-satisfaction.<sup>68</sup> <sup>69</sup>  
If e-satisfaction is increased,<sup>70</sup> it will also increase e-loyalty of customers, and vice  
versa when e-satisfaction decreases, the e-loyalty customer will also decrease.  
As explained in the study, i.e., (Curras-Perez et al., 2017). A higher level of  
customer satisfaction will lead to greater loyalty. Several studies have revealed  
that there is evidence in the context of e-commerce about the positive impact

of online satisfaction on loyalty (Masouras & Papademetriou, 2018). Based on the argumentation above, the hypothesis is formulated<sup>71</sup> as follows:

H5: e-satisfaction influences e-loyalty

E-CRM

E-Loyalty

E-ServQual

E-Satisfaction

Figure 1: Research Framework

Research Design and Methodology

Samples

The population in this study is that consumers never use the transport service online based mobile apps is GoJek. The company itself was chosen as an object to measure loyalty for several reasons, including (1) Gojek is the only e-commerce in Indonesia that has a Decacorn or status startup. (2) Gojek is the platform most significant payment in Southeast Asia (3) Gojek ride-sharing is the most widely used application in Indonesia with the highest number of monthly active users in 2018.<sup>72</sup> Given that the population is infinite, the sampling technique uses purposive sampling. Due account(judgment)is the customers who have used the service last Gojek for one year, and have carried out transactions via the application at least three times that includes all the services provided by the platform.<sup>73</sup> The data collection period conducted for

three months, from January to March 2019. Determination of the number of samples is in line with the analysis model use SEM based on PLS. The minimum sample size for SEM that uses the estimated model maximum likelihood estimation is 200 samples (Hair et al., 2014). Referring to the explanation above, the total respondents who participated in the survey, online there were 298 people, but after going through the screening process samples(judgment)eligible customers set at 167 Gojek. The questionnaire design consisted of two parts, namely demography of respondent and variable measurement data, as described in table 2. Respondent data consisted of gender, age, residential area, occupation, the intensity of using GoJek services, and type services that are often purchased, while the variable measurement data contains the results of respondents' questionnaire answers.<sup>74</sup>

### Measurement

This study uses electronic surveys, filling out survey results using a Likert scale 1-5 (Strongly disagree - Strongly Agree), such as measurements used in research. The measurement of the results of the study was carried out in several stages before entering data analysis and hypothesis testing. First Section; measure confirmatory factor analysis (CFA) to assess the feasibility of indicators on dimensions such as; validity and reliability (AVE, Cronbach alpha, and Critical Ratio). Second section; measure CFA between dimensions to variables. The third phase; is testing independent variables on dependent variables through moderating effects or hypothesis testing stages as in figure 1. Measurement of indicators/dimensions and variables using SmartPLS 3.0 test equipment, which is comprehensively explained<sup>75</sup> in table 1. The measurement criteria for variables and constructs based on AVE values  $> 0.6$  (Fornell & Larcker, 1981), (Hair et al., 2014). Composite Reliability Value (CR)

0.6) (Chin, 1998). Measurement of Cronbach alpha value  $> 0.5$ , R-square, F-Square and measurement of loading-factors as the main formers of the variable (Chin, 1998) which explain in detail in table 3.

#### Table 1: Measurement of Variable

Variable

Item Questionary

Major References

E-CRM

Features in the Gojek application help me choose a product/service before passing a (prepurchase) transaction

ECRM1

(Abdulfattah, 2012), (Dubihlela & Molise-Khosa, 2014), (Harrigan et al., 2012), (Mang'unyi & Khabala, 2017)

Gojek provides security guarantees during the transaction process (in purchase)

ECRM2

Gojek always gives a quick response when a problem occurs after the transaction is done (postpurchase)

ECRM3

## E-Service Quality

Gojek provides convenience to find what I need (type and price of the product, method of payment, etc.).

ESQ1

(Zeithaml et al., 2002), (Parasuraman et al., 2005), (Haming et al., 2019), (Li et al., 2015), (Silalahi et al., 2017)

The Gojek always fulfils the promised offer (promos or discounts offered according to the time of payment).

ESQ2

The Gojek application can execute customer requests accurately.

ESQ3

The Gojek party protects my privacy

ESQ4

process of the problem/complaint about my purchase immediately.<sup>76</sup>

ESQ5

Gojek provides compensation if the service received is not satisfactory



ESQ6

Gojek provides to resolve my shopping problems

ESQ7

E-Satisfaction

I feel comfortable when using Gojek

ES1

(Li et al., 2015), (Ranjbarian et al., 2012), (Mang'unyi & Khabala, 2017).

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I am satisfied with the information provided by Gojek

ES2

I am satisfied with the Gojek application screen

ES3

I am satisfied because Gojek protects my privacy well

ES4

I am satisfied with the response/feedback given by Gojek

ES5

E-Loyalty

I probably won't move to online transportation other than Gojek

EL1

(Huang & Zhou, 2018), (Silalahi et al., 2017), (Bacile, Wolter, Allen, & Xu, 2018),  
(Mang'unyi & Khabala, 2017)

If I want to use transportation online, I will choose Gojek

EL2

I always say positive things about Gojek to other people

EL3

I recommend to colleagues and family to always use Gojek

EL4

## Result and Discussion

### Demography of Respondent

The majority of respondents are women in the age range of 21-31 years and have status as students who have an average income of 1 million per month on average. The intensity of respondents using Gojek per day was recorded<sup>77</sup> at least once, and the most favoured service was Go-food and Go-ride. In general, respondents are classified in the middle-income segment and have mature knowledge and experience of mobile application-based online transportation. Customers can also be said to have made Gojek as the leading daily

transportation choice. This demographic and psychographic condition is an essential foundation for marketers e-commerce, especially Gojek, in determining effective and efficient strategies and targets.

Table 2: Data Demography (N = 167)

Attributes

Item

F

%

Gender

Age (years)

Occupation

Income / Per-month (in million rupiah)

Per-day intensity

The GoJek service is most often used<sup>78</sup>

Men

Women

< 20 year

21- 31 year

> 30 year

Student

Employee

Entrepreneurs

others

< 1 million

1 - 3 million

> 3 million

<sup>79</sup>  
1 time

1-2 times

> 2 times

Go-Ride

Go-Car

Go-Food

Go-Send

others

69

98

71

80

16

67

48

30

22

72

56

39

114

44

7

48

30

51

23

13

41.8

59.2

43.0

47.4

9.6

40.6

29.0

18.1

12.3

43.6

33.9

22.5

69.2

26.6

4.2

29.0

18.1

30.9

13.9

8.1

### Statistical Result

An instrument showed the validity testing criteria if it has a loading factor above 0.7 (Chin, 1998). The test results in table 3 can be seen<sup>80</sup> that all items that measure variables have values greater than 0.7. Thus it can be stated that each item<sup>81</sup> is able to<sup>82</sup> measure latent variables that correspond to these items. The test results in table 3 can also state<sup>83</sup> that each value of the constructed variable has met the specified threshold criteria namely AVE > 0.5, CR > 0.7, and  $\alpha > 0.6$ , so it can be concluded that all items are declared reliable in measuring latent variable.<sup>84</sup> The test results show that value Q2 endogenous variables, namely e-satisfaction and e-loyalty amounted to 0.703 (see. Table 4.). These results indicate that the diversity of e-satisfaction and e-loyalty variables can be explained<sup>85</sup> by the e-CRM and e-service quality variables of 70.3%.<sup>86</sup>

### Table 3: Discriminant Validity

E-CRM

E-Service Quality

E-Satisfaction

E-Loyalty

Std. Dev

Std. Error

T-Stats

ECRM1

0,877

0,653

0,604

0,554

0,023

0,023

38,690

ECRM2

0,861

0,640

0,546

0,464

0,032

0,032

26,891

ECRM3

0,755

0,715

0,546

0,469

0,073

0,073

10,406

ESQ1

0,660

0,763

0,452

0,498

0,092

0,092

7,219

ESQ2

0,576

0,732

0,584

0,522

0,068

0,068

10,740

ESQ3

0,707

0,790

0,589

0,597

0,052

0,052

15,145

ESQ4

0,592

0,825

0,736

0,668

0,040

0,040



20,780

ESQ5

0,667

0,779

0,633

0,555

0,040

0,040

19,452

ESQ6

0,553

0,741

0,602

0,517

0,072

0,072

10,239

ESQ7

0,506

0,728

0,717

0,520

0,048

0,048

15,183

ES1

0,499

0,586

0,771

0,587

0,027

0,027

28,798

ES2

0,426

0,575

0,712

0,674

0,042

0,042

16,927

ES3

0,450

0,693

0,790

0,537

0,044

0,044

18,069

ES4

0,680

0,752

0,864

0,765

0,027

0,027

31,764

ES5

0,606

0,644

0,806

0,588

0,034

0,034

23,788

EL1

0,444

0,494

0,644

0,756

0,029

0,029

26,393

EL2

0,565

0,732

0,736

0,843

0,031

0,031

27,346

EL3

0,438

0,506

0,589

0,764

0,050

0,050

15,319

EL4

0,358

0,504

0,461

0,705

0,083

0,083

8,511

#### Table 4: The Goodness of Fit Model

Items

AVE

Composite Reliability

Cronbachs Alpha

E-CRM

3

0,6937

0,8712

0,7766

E-Service Quality

7

0,5667

0,9011

0,872

E-Satisfaction

5

0,6242

0,8922

0,8483

E-Loyalty

4

0,5905

0,8517

0,7694

GFI

0.703

Figure 2: PLS Analysis

Hypothesis Result

The results of hypothesis testing for each of the latent variable relationships presented in table 5 also state that e-CRM implemented by GoJek apps has a positive and significant effect on consumer e-satisfaction (sig. P-value 0.035 <0.05. so that hypothesis H1 = accepted).<sup>87</sup> e-CRM implemented by the GoJek apps as an online transportation mode does not have a significant effect on e-

loyalty (sig. p-value  $0.057 > 0.05$ , so that the hypothesis H2 = rejected). E-Service quality has a positive and significant effect on e-satisfaction (sig.p-value  $0.000 < 0.01$  so that the hypothesis H3 = accepted). E-Service quality has a positive and significant effect on e-loyalty (sig.p-value  $0.043 < 0.01$  so that the hypothesis H4 = accepted). e-satisfaction has a positive and significant effect on e-loyalty (sig.p-value  $0.000 < 0.01$  so that the hypothesis H5 = accepted). Variable test results explain that the most dominant influence is shown<sup>88</sup> in the relationship between e-service quality variables on e-satisfaction.

Table 5: Hypothesis Result

Original Sample	Standard Error	T Statistics	P-value	Result
E-CRM à E-Satisfaction	0,348	0,103	3,378	$0.035 < 0.05$
E-CRM à E-Loyalty	0,117	0,096	1,218	$0.057 > 0.05$

Rejected

E-Service Quality à E-Satisfaction

0,589

0,094

6,265

0.000 < 0.01

Accepted

E-Service Quality à E-Loyalty

0,248

0,122

2,032

0.043 < 0.05

Accepted

E-Satisfaction à E-Loyalty

0,611

0,098

6,208

0.000 < 0.01

Accepted

Discussion

The coefficient value of each predictor shows the positive relationship between e-satisfaction and e-loyalty has the highest estimate or dominant influence, where this indicates that e-loyalty is formed from the experience and knowledge of customers who feel satisfaction when using Gojek.<sup>89</sup> In H1, the<sup>90</sup> analysis test shows that the e-CRM construct is a significant predictor of e-satisfaction on application-based online transportation services, namely

Gojek. These results are consistent with, i.e. (Alhaiou, 2011) and (Abdulfattah, 2012). The results of the study show the overall process perceived by customers (prepurchase), (in purchase), and (postpurchase) in the mobile application of online transportation services GoJek plays a role in shaping customer satisfaction.<sup>91</sup> The test results in the second hypothesis indicate that the e-CRM construct does not have a significant effect on e-loyalty, and this result is different from previous studies (Alhaiou, 2011) and (Mang'unyi & Khabala, 2017).<sup>92</sup> This inconsistency is possible if it is reviewed<sup>93</sup> by the demographic and psychographic conditions of Gojek customers. The majority of respondents are students and employees in their 20s who are vulnerable to move from one brand to another (e.g. Grab or Uber). The GoJek management can maximize features that support consumer comfort, especially services after making a transaction (postpurchase) where this item has the lowest loading factor among other items.<sup>94</sup> Gojek Management, for example, can implement a postpurchase program such as a service centre that can be directly connected with Gojek when a problem occurs after the service is provided.<sup>95</sup> The third hypothesis, where the construct of e-service quality has a positive and significant influence on e-satisfaction and supports research from (Ranjbarian et al., 2012), (Li et al., 2015). These results reveal that customers are satisfied with the Gojek application-based online transportation electronic service. The factor of protection of personal data and transactions is a strong reason for this result and is related to the fact that Gojek can store telephone numbers, home addresses, credit card numbers, and other private information, so security guarantees are considered by respondents to be a significant factor in creating satisfaction.<sup>96</sup> The fourth hypothesis, e-service quality has a positive and significant effect on e-loyalty, and these results are in line with research (Zhao et al., 2012) and (Li et al., 2015). The statement indicates that GoJek



customers feel the efficiency in conducting transactions both in terms of time and cost, as well as the availability of information and the smoothness of the transaction, <sup>97</sup> which determines for customers to continue to transact through the availability of adequate system facilities and the guarantee of confidentiality of customer's data. <sup>98,99</sup> Psychographic data of respondents who registered using Gojek services at least once per day confirms this finding, and with these benefits, customers are sure to return to using Gojek to support their daily activities. <sup>100</sup> The last hypothesis in this study found that a positive and significant relationship between e-satisfaction and e-loyalty on the use of Gojek online transportation. Various study results state the same thing, where e-loyalty is an antecedent of e-satisfaction. GoJek customers will not turn to other brands because they have had a pleasant experience when they place an order. In this particular context, maintaining the consistency of the quality of information; application design; payment method, and guarantees of security and privacy and post-purchase services simultaneously can produce customers with high loyalty.

Managerial Implication: This study has an impact on practical implications and new views in the practice of e-commerce, especially in the online transportation industry. The confirmed causality here can at least help managers to understand the predictors of e-satisfaction and customer e-loyalty. The results show that e-CRM predictors and e-service quality play a vital role in the application-based online transportation industry mobile. Based on these results, The Gojek management can focus on improving the quality of services both before customers buy, are buying, and after doing because customer experience in perceiving Gojek is the key to winning the competition and continuing to maintain brand differentiation in the market. <sup>101</sup> That way,

customers will reach a high level of loyalty, where they will make repeat purchases and recommend brands to their friends or family.

Theoretical Implication: The findings of this study are also expected to enrich theoretical studies on e-commerce, especially application-based transportation, by contributing new thinking to the academic world. The finding of significance and insignificance of exogenous constructs towards endogenous can be used as the basis for further research. However, even though it has been implemented according to the principles of the quantitative approach, this study cannot be separated from several limitations. First, the e-CRM construct cannot directly create e-loyalty for transportation customers online Gojek, where irrelevant results are found between the two constructs. Further research can add control variables (age, gender, and income) in the primary data analysis process. Second, the scope of the research sample is considered not sufficient to represent the respondents (Gojek customers) as a whole, and this affects the justification of Gojek services. Given the concept of e-commerce is so broad and involves multidisciplinary sciences, then future research can explore or collaborate with other variables to get a more comprehensive understanding, especially e-commerce based mobile applications.

## Conclusion

CRM, Service Quality, Satisfaction and Loyalty implemented comprehensively in cyberspace (the internet) provides a clear picture for academics but also for practitioners and stakeholders who are struggling in the service industry that specifically appoints online transportation business people. Moreover, the implementation of strategies in increasing customer relationship and service quality to support satisfaction and consumer loyalty in cyberspace (internet) is

susceptible so that strategic and appropriate efforts are needed so that the implementation of CRM and service quality can run as expected.<sup>110</sup> Consumer privacy security guarantees in cyberspace are the primary reference in addition to prioritizing access to convenience and convenience that should be taken into account to realize society 5.0.

## References

107.	<i>is considered</i>	Passive Voice Misuse	Clarity
108.	<i>Given the concept of e-commerce is so broad and involves multidisciplinary sciences, then future research can explore or collaborate with other variables to get a more comprehensive understanding, especially e-commerce based mobile applications.</i>	Hard-to-read text	Clarity
109.	<i>CRM, Service Quality, Satisfaction and Loyalty implemented comprehensively in cyberspace (the internet) provides a clear picture for academics but also for practitioners and stakeholders who are struggling in the service industry that specifically appoints online transportation business people.</i>	Hard-to-read text	Clarity
110.	<i>Moreover, the implementation of strategies in increasing customer relationship and service quality to support satisfaction and consumer loyalty in cyberspace (internet) is susceptible so that strategic and appropriate efforts are needed so that the implementation of CRM and service quality can run ...</i>	Hard-to-read text	Clarity
111.	<i>service quality on customer satisfaction and repurchase intentions,</i>	An Empirical Study of the impact of Service Quality on ... <a href="https://www.ijtsrd.com/management/marketing/12805/an-empirical-study-of-the-impact-of-service-quality-on-customer-satisfaction-and-repurchase-intentions-in-hotels-of-northern-india/anjum-ara">https://www.ijtsrd.com/management/marketing/12805/an-empirical-study-of-the-impact-of-service-quality-on-customer-satisfaction-and-repurchase-intentions-in-hotels-of-northern-india/anjum-ara</a>	Originality
112.	<i>Therefore, this study aims to analyze the effect of</i>	How New HRM Practices, Organizational Innovation, and ... <a href="https://www.mdpi.com/2071-1050/11/3/621">https://www.mdpi.com/2071-1050/11/3/621</a>	Originality

113.	<i>Internet and web technology to facilitate the implementation of</i>	eCRM-Service Quality	Originality
114.	<i>E-service quality is defined as the extent to which a website facilitates efficient and effective shopping, purchasing and</i>	A Model to Identify the Dimensions of Mobile Service Quality <a href="http://users.uom.gr/~stiakakis/download/C%5B14%5D.pdf">http://users.uom.gr/~stiakakis/download/C%5B14%5D.pdf</a>	Originality
115.	<i>correct technical functions of the site; (4) Privacy, the</i>	The Examination Electronic Services Quality of Sina Bank ... <a href="http://psrcentre.org/images/extraiimages/118.%201211720.pdf">http://psrcentre.org/images/extraiimages/118.%201211720.pdf</a>	Originality
116.	<i>increasing global penetration of the internet, e-CRM has become a more</i>	Eric E. Mang'unyi (South Africa), Oumar T. Khabala (Kenya ... <a href="https://businessperspectives.org/images/pdf/free/8917/BBS_2017_02_Mangunyi.pdf">https://businessperspectives.org/images/pdf/free/8917/BBS_2017_02_Mangunyi.pdf</a>	Originality
117.	<i>stages of the transaction cycle, on customer satisfaction on</i>	Eric E. Mang'unyi (South Africa), Oumar T. Khabala (Kenya ... <a href="https://businessperspectives.org/images/pdf/free/8917/BBS_2017_02_Mangunyi.pdf">https://businessperspectives.org/images/pdf/free/8917/BBS_2017_02_Mangunyi.pdf</a>	Originality
118.	<i>I am satisfied with the information provided by</i>	Top 3,411 Reviews about Instant Checkmate <a href="https://www.consumeraffairs.com/retail/instantcheckmatecom.html">https://www.consumeraffairs.com/retail/instantcheckmatecom.html</a>	Originality

# Moving From Traditional to Society 5.0: Enhancing Consumer Transportation Pleasure by Implication of Technology

Mashur Razak<sup>1</sup>, Gunawan Bata Ilyas<sup>2</sup>, Muhammad Hidayat<sup>3</sup>, Muhammad Ashoer<sup>4</sup>, Fitriany<sup>5</sup>, Aditya Halim Perdana Kusuma Putra<sup>6</sup>

STMIK Handayani Makassar<sup>1</sup>, STIE AMKOP Makassar<sup>2</sup>, STIE Nobel Indonesia<sup>3,5</sup>, Faculty of Economics, Department of Management, Universitas Muslim Indonesia<sup>4,6</sup>

\*Corresponding author : ([adityatrojhan@gmail.com](mailto:adityatrojhan@gmail.com))\*

## Abstract

**Purpose:** Capturing the shifting consumer behaviour perspective on online transportation network performance in Indonesia, this study aims to empirically examine the impact of electronic customer relationship management (e-CRM) and e-service quality on customer e-satisfaction and e-loyalty.

**Research Design and Methodology:** A quantitative approach was applied, and then we determined the respondents who met the predetermined criterion by using purposive sampling method. In total, 167 online transportation customer in Indonesia participated in this electronic questionnaire survey. To tested the collected data, Partial Least Square (PLS) - *Structural Equation Model* (SEM) analytical tools were employed.

**Result and Findings:** There are five hypotheses proposed in this study and state that only 1 hypothesis is rejected, The dominant relationship between variables in the hypothesis is shown in the variable relationship of e-service quality on e-satisfaction. The findings of this research provide both managerial and theoretical implications to maintain customer e-loyalty in online transportation network business environment in Indonesia.

**Keywords:** STIE

**JEL Classification Code:** M0, M2, M31

## 1. Introduction

The concept of society 5.0 has been explained by Salgues, (2018) And is becoming a hot conversation in the world, where society 5.0 definitively echoes the integration between social of intelligence, physical space and cyberspace (internet). The concept of society 5.0 combines the history of human civilization, starting from the hunter-gatherer society, the agricultural society, industrial society and information society. Society 5.0 is also very closely related to the completion of social work that is dominant, involving more sophisticated technology. Like today, one of the shifts in the era of transportation that was once accessible through conventional ordering, then with the help of the role of information technology, it is enough to do it through the reach of internet access on smartphone devices. Changes in the times that have given birth to the concept of 5.0 are not without purpose. In the past (society 1.0 - 4.0) leaving many complicated cases that were identical such as the use of energy, the need for food, international competition as well as increasingly complex equality and justice gave birth to the concept of society 5.0 which was considered as an alternative solution to achieve peak efficiency and effectiveness, mobility in an integrated, complex and privacy-protecting manner. Steady away from the development of information technology, the internet

in the grip, the prevalence of knowledge and use of technology as if making the world feel no longer has limits. One of the effects of technology is the birth of e-commerce which also inspired many innovative people to be more creative to create a more private world not only allowing everyone to connect with anyone in the world ie, Social Media, Social Chatting apps, and even inspiring certain parties to develop smart-transportation ie, Uber, Grab and even GoJek (Indonesia's online transportation application). Society 5.0 is tight and thick with the concept of IoT (internet of things) where sharing-knowledge is assured to be accessible to anyone to create new, even unlimited size and value, and the replacement of physical materials into evidence in the form of digital to reduce capacity and also space style society 1.0 - 4.0. Not only is the presence of robots, but artificial intelligence, cloud computing will also be a common sight for the future. The new round of human beings who are friends with machines as presented in various Sci-Fi films does not seem to be a delusion in the future, today we can witness that were little by little work is being taken over by machines and half the world is also present our grip (smartphone).

Entering the new phase of life in Society 5.0, the growth of the internet gave rise to a variety of-based companies online, the impact of which was seen in the increasingly competitive business competition map e-commerce, one of which was marked by the presence of services online transportation based mobile application. This business is proliferating and allows consumers to be able to order products and services quickly and easily through their smartphone (Wallsten, 2015). The application also offers a variety of competitive advantages and added value in bringing drivers and customers together when compared to conventional transportation (Semchugova et al., 2017). Another benefit that is also felt is that the driver and customer can know the location of each other accurately through the help of Google Maps, customers can also find out information about driver and vehicle data, and customers can easily find transportation to go to the desired place (time efficiency) (Silalahi, Handayani, & Munajat, 2017). These various benefits make mobile services increasingly popular, especially among urban communities. This sector is also increasingly promising, along with the growth in the number of smartphone users in Indonesia. Which has penetrated 130 million users with a penetration of 48% This figure also places Indonesia as the third-largest smartphone user in the Asia Pacific after China and India (www.wearesocial.com, 2019).

The above phenomenon shows that online transportation services have been in the minds of customers and gradually become a substitute for conventional transportation. With the increasingly massive online transportation, various aspects that can support survival and company success are crucial to be studied in depth. Customer relationship management (CRM), which in this study was changed to electronic CRM (e-CRM), is one of the essential constructs in e-commerce. The adoption of e-CRM has become the primary strategy recently in most companies e-commerce, especially developing countries, and, therefore, managers are willing to emphasize the development and maintenance of decent relationships with customers that provide sustainable benefits (Harrigan et al., 2015). Some researchers like Zeynep Ata & Toker (2012); and (Mang'unyi & Khabala, 2017) Has suggested that many business benefits derived from implementing e-CRM, especially increasing customer satisfaction and loyalty. Other studies from Some researchers like Abdulfattah (2012); (Rahimiparvar, 2014) explain the use of e-CRM in establishing customer relationship sets proven to affect online customer satisfaction as well as service quality and retention (Khalifa & Shen, 2009), (Wang & Li, 2006) also, promoting the development of attractive virtual communities and increasing customer satisfaction (Alim & Ozuem, 2014). Lee-Kelley, Gilbert, & Mannicom (2003) Also identifies the antecedents of e-CRM against e-loyalty in the financial services industry. Unfortunately, the e-CRM study above has not focused on the study e-commerce of mobile application-based online transportation services so that it requires the development of a more in-depth study.



The literature also notes that e-service quality plays a crucial role in creating business strategies e-commerce, mainly based on mobile applications. Zeithaml, Parasuraman, & Malhotra, (2002), (Haming et al., 2019) and (Silalahi et al., 2017) agree that the quality of electronic services is an essential point in creating competitive advantage and long-term retention for fully operational companies online. Various dimensions have been proposed; for example, Yoo & Donthu, (2002) develop the SITEQUAL model and validate strict psychometric instruments to measure the perceived quality of internet shopping sites. As well as, Barnes & Vidgen (2002) proposed a WebQual 4.0 model in measuring the quality of electronic service for bookstore websites, and e-SERVQUAL dimensions by Zeithaml, Parasuraman, & Malhotra, (2002) become the most used model by researchers. In Indonesia, the issue that arises from online transportation services has attracted the attention of researchers, for example, Santoso & Aprianingsih (2017) Which analyzes the quality of electronic services on Go-Ride as part of the GoJek application on Java, Indonesia. Although this study was successful in revealing the relationship between perceptions of service quality and electronic service quality on customer satisfaction and repurchase intentions, the results of this study were not sufficient in expressing the overall quality of electronic services to the features of mobile applications that made customers reuse the application comprehensively because the focus location is only in one of the services in the Go-Ride application. Besides, the generalization of research results is minimal. That is because the respondents involved in this study were mostly students. Previously, the discussion of the quality of electronic services has been discussed extensively in the context of websites such as (Yoo & Donthu, 2002), (Barnes & Vidgen, 2002), (Zeithaml et al., 2002), (Tsang, Lee, Wong, & Chong, 2012), (Haming et al., 2019) and (Yang & Shim, 2018).

Referring to the explanation of the previous research above, the discussion of e-CRM and e-service quality is still dominant in the context of the website and also the lack of studies focusing on transportation online -based mobile application. Therefore, this study aims to analyze the effect of the application of e-CRM and e-service quality on satisfaction and loyalty in online transportation service mobile applications in Indonesia. Objectively the results of this study will be beneficial for the development of the online transportation industry and academic enrichment, especially for the marketing management strategy. For the transportation industry, outlining the constructs of e-CRM and the quality of electronic services on mobile applications can help online transportation companies capture customer perceptions and expectations. Then, this will provide insight for companies in developing the right features and benefits continuously on mobile applications to satisfy their customers. For academic purposes, this research will contribute to the development of the construct of e-CRM and the quality of electronic services related to mobile applications. Also, it can be a reference material for the development of further knowledge that will research in the field of e-commerce.

## **2. Literature Review and Conceptual Development**

### **2.1. E-CRM**

E-CRM is defined as the advantage of marketing and technology-centred services, combining traditional customer relationship management (CRM) tactics and e-business market application applications used by organizations to maintain customer relations (Dubihlela & Molise-Khosa, 2014), (Harrigan, Ramsey, & Ibbotson, 2012), (Mang'unyi & Khabala, 2017). The internet uses web-based technology to attract new customers, analyze their preferences and behaviour, adjust support services and improve service and value benefits, retain customers, and craft tactics to encourage loyalty (Zeynep Ata & Toker, 2012). In essence, e-CRM is used to interact with customers electronically (Lau et al., 2013), (Tauni et al., 2014). Internet and web technology to facilitate the implementation of e-CRM because they interact



between institutions and their customers. Therefore, the features that makeup e-CRM remain necessary for managing online customer relations and building and maintaining loyalty. Feinberg & Kadam (2002) States that there are three features in e-CRM: pre-transactions, during transactions and post-transactions, encountered by customers during the purchase of services, at the time of purchase, and after purchase. The transaction cycle strengthens the three-stage relationship while increasing overall customer satisfaction and loyalty. Pre-transaction features include the ability to enter, customize and personalize information, and information search capabilities, including some items, for example, site customization, local search engines, and chat at the pre-purchase stage will lead to customer satisfaction, trust and retention (Tian & Wang, 2017). Furthermore, various e-CRM features during the transaction process can influence customer decisions to complete online transactions. The level of customer knowledge and experience will be fundamental at this stage where it includes the guidance provided on procedures for buying services or products, criteria that must be considered, and how to evaluate their purchases. At this stage, service suppliers and customers agree to the conditions of their transactions based on their negotiations. The last stage is a post-transaction feature consisting of general questions (FAQ), problem-solving and online feedback (Russell et al., 2018), which requires customer service.

## 2.2. *E-Service Quality*

E-service quality is defined as the extent to which a website facilitates efficient and effective shopping, purchasing and shipping activities (Zeithaml et al., 2002). Yoon C. Cho (2015) explained that the quality of electronic services is the evaluation and overall assessment of customers regarding the advantages and quality of electronic service delivery in the virtual market. Then, Hwang & Kim (2018) States that the quality of electronic services is increasingly recognized as an essential and critical aspect in determining competitive advantage and factors in long-term retention of companies operating online. At least there are two perspectives in determining service quality. The first perspective states that service quality is a comparison between customer expectations and customer perceptions of experienced services (Hemalatha, Dumpala, & Balakrishna, 2018), (Haming et al., 2019). The second perspective argues that service quality is only measured by what customers feel. Based on the first perspective, Parasuraman, Zeithaml, & Berry (1994) developing the SERVQUAL scale, which is one of the most influential studies in service quality. Awasthi, Chauhan, Omrani, & Panahi (2011) and (Haming et al., 2019) explained that there are five (5) dimensions of service quality in SERVQUAL namely Tangibles, Reliability, Responsiveness, Assurance, and Empathy. Parasuraman, Zeithaml, & Malhotra (2005) then develop ES-QUAL to measure the quality of electronic services (electronic services) delivered through the website. ES-QUAL also includes technical aspects such as efficiency, fulfilment, system availability, ease of use, search speed, privacy and security issues. Zeithaml et al., (2002) Classify all seven dimensions of E-ServQual into four core dimensions customers use to assess website a where they do not have any questions or problems are (1) Efficiency, simplicity and speed of accessing and using the site; (2) Fulfilment, the extent to which the site promises regarding the availability of orders and availability of items are fulfilled; (3) System availability, correct technical functions of the site; (4) Privacy, the extent to which the site is safe and protects user information. Moreover, the three dimensions that customers use to assess recovery services when they have a problem or question are (5) Responsiveness, effective problem handling and returns through the site. (6) Compensation, the degree to which the site compensates customers for problems. (7) Contact, availability of assistance via telephone or representative online.

## 2.3. *e-Satisfaction dan e-Loyalty*

Anderson & Srinivasan (2003) e-satisfaction is described as a gratuity from customers that comes from previous real purchasing experience with individual electronic trading companies. This can be related to customer emotions, such as feeling happy. Satisfaction, trust, return visit intention, repurchase intention, and loyalty have all been outlined as a result of positive customer experience (Randall et al., 2017) and (Haming et al., 2019). Ranjbarian et al., (2012) Classify 5 (five) main dimensions that influence e-satisfaction, namely; Convenience, Merchandising, more valuable information (broader and higher quality) are available online to produce better purchasing decisions and higher levels of e-satisfaction, Site design, Security and Serviceability. Loyalty is basically built by consumer experience. Oliver (1999) define customer loyalty as a firm commitment to buy back preferred products or services consistently in the future, causing the same brand to repeat or purchase the same brand, regardless of situational influences and marketing efforts. Kotler (2012) showing loyalty behaviour can influences business growth, and the company gets to profit from premium prices, references, increases purchases and higher balances, reduces operating costs and customer acquisition costs. Menurut Anderson & Srinivasan (2003) Loyalty in online behaviour is an attitude that benefits customers and their commitment to online companies that result in repurchase behaviour. Loyal customers are customers who are committed and bound to retailers and are not easily bothered by more attractive alternatives (Putra, Said, & Hasan, 2017). The advent of new technology has caused a shift from CRM to e-CRM, and with the increasing global penetration of the internet, e-CRM has become a more accessible communication tool and relationship-building platform. Mang'unyi & Khabala (2017) Postulate that e-CRM infrastructure provides valuable customer support to remain loyal because the information stored in the e-CRM database helps organizations to see actual costs to attract and retain customers. Companies can also access new international customers and seize valuable data that is important for the competitiveness and market share of the company. Harrigan et al. (2015) Explaining the relationship between e-CRM and customer loyalty means that more satisfied customers buyback and spread positive things about positive service. Thus, loyalty will continue to play an essential role in the competitiveness and profitability of the organization. Apart from that, some researchers, i.e., (Gorondutse, Hilman, & Nasidi, 2014; Hayes, 2008; Khan & Fasih, 2014) which has suggested that e-CRM impacts loyalty.

Alhaiou (2011) explains the relationship between e-CRM features and e-loyalty to online buyers at various stages of the transaction cycle argues that the use of e-CRM in building customer relations affects the satisfaction and loyalty of online consumers. Research similar to that, Abdulfattah (2012) investigate the effects of various e-CRM features at various stages of the transaction cycle, on customer satisfaction on the bank's website. The researcher also determined that e-CRM affects customer relations and increases online customer satisfaction and service quality. Rabbai (2013) confirm the effect of e-CRM on customer loyalty. Meanwhile, Alim dan Ozuem (2014) concluded that e-CRM was effective in strengthening relationships with customers and promoting the development of attractive virtual communities, which further increased satisfaction. Other studies as stated by (Abdulfattah, 2012), (Rahimiparvar, 2014) regarding the use of e-CRM in building customer relationships establishes that it affects online customer satisfaction, service quality and retention (Tian & Wang, 2017) moreover, promoting the development of attractive virtual communities that further enhance satisfaction. Based on the explanation, the hypothesis is stated as follows:

*H1: e-CRM influences e-satisfaction*

*H2: e-CRM influences e-loyalty*

E-Service quality is a combination of quality internet-based services. Where customers will feel more efficient in carrying out transactions in terms of time and cost, as well as the availability of information and smooth transactions become the choice of customers to transact

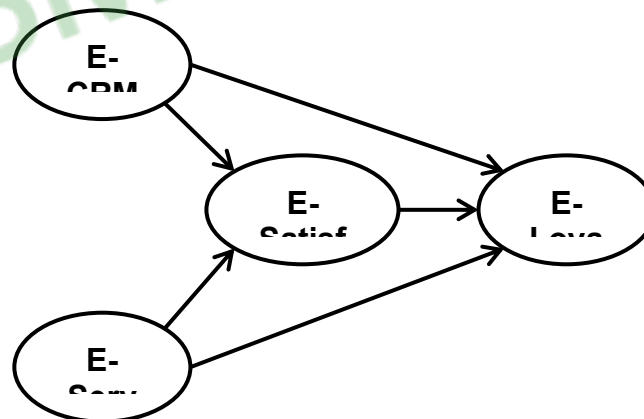
through the availability of adequate system facilities and internet network and guaranteed confidentiality of customer data. Thus e-service quality provided by the company will satisfy or not satisfy the customer because the quality of service provided by the company influences the level of customer satisfaction. The previous research by Zhao, Lu, Zhang, & Chau, (2012) States that there is a positive relationship between e-service quality, e-satisfaction and e-loyalty. Perfect e-Service quality will be the basis of customer satisfaction in the scope of e-commerce (e-satisfaction). Based on the explanation above, the hypothesis is proposed as follows:

*H3: e-Service Quality influences e-Satisfaction*

*H4: e-Service Quality influence e-loyalty*

After consuming the product were they buy, the consumer will feel satisfied or dissatisfied depending on the quality of service received from the company where the customer will evaluate after consuming the product or service. Furthermore, customers will be satisfied(satisfaction)or dissatisfied(dissatisfaction)to the consumption of products or services that have been done. If the customer feels satisfied, it will encourage the customer to buy and re-consume the product and vice versa. In many studies explain that there is a positive relationship between e-satisfaction and e-loyalty, which means that the high and low of e-loyalty is also determined by e-satisfaction. If e-satisfaction is increased, it will also increase e-loyalty of customers, and vice versa when e-satisfaction decreases, the e-loyalty customer will also decrease. As explained in the study, i.e., (Curras-Perez et al., 2017). A higher level of customer satisfaction will lead to greater loyalty. Several studies have revealed that there is evidence in the context of e-commerce about the positive impact of online satisfaction on loyalty (Masouras & Papademetriou, 2018). Based on the argumentation above, the hypothesis is formulated as follows:

*H5: e-satisfaction influences e-loyalty*



**Figure 1: Research Framework**

### **3. Research Design and Methodology**

#### *3.1. Samples*

The population in this study is that consumers never use the transport service online based mobile apps is GoJek. The company itself was chosen as an object to measure loyalty for several reasons, including (1) Gojek is the only e-commerce in Indonesia that has a Decacorn or status startup. (2) Gojek is the platform most significant payment in Southeast

Asia (3) Gojek ride-sharing is the most widely used application in Indonesia with the highest number of monthly active users in 2018. Given that the population is infinite, the sampling technique uses purposive sampling. Due account(judgment)is the customers who have used the service last Gojek for one year, and have carried out transactions via the application at least three times that includes all the services provided by the platform. The data collection period conducted for three months, from January to March 2019. Determination of the number of samples is in line with the analysis model use SEM based on PLS. The minimum sample size for SEM that uses the estimated model maximum likelihood estimation is 200 samples (Hair et al., 2014). Referring to the explanation above, the total respondents who participated in the survey, online there were 298 people, but after going through the screening process samples(judgment)eligible customers set at 167 Gojek. The questionnaire design consisted of two parts, namely demography of respondent and variable measurement data, as described in table 2. Respondent data consisted of gender, age, residential area, occupation, the intensity of using GoJek services, and type services that are often purchased, while the variable measurement data contains the results of respondents' questionnaire answers.

### 3.2. Measurement

This study uses electronic surveys, filling out survey results using a Likert scale 1-5 (Strongly disagree - Strongly Agree), such as measurements used in research. The measurement of the results of the study was carried out in several stages before entering data analysis and hypothesis testing. First Section; measure confirmatory factor analysis (CFA) to assess the feasibility of indicators on dimensions such as; validity and reliability (AVE, Cronbach alpha, and Critical Ratio). Second section; measure CFA between dimensions to variables. The third phase; is testing independent variables on dependent variables through moderating effects or hypothesis testing stages as in figure 1. Measurement of indicators/dimensions and variables using SmartPLS 3.0 test equipment, which is comprehensively explained in table 1. The measurement criteria for variables and constructs based on AVE values  $> 0.6$  (Fornell & Larcker, 1981), (Hair et al., 2014). Composite Reliability Value (CR $> 0.6$ ) (Chin, 1998). Measurement of Cronbach alpha value $> 0.5$ , R-square, F-Square and measurement of loading-factors as the main formers of the variable (Chin, 1998) which explain in detail in table 3.

**Table 1: Measurement of Variable**

Variable	Item Questionary	Major References
<b>E-CRM</b>	Features in the Gojek application help me choose a product/service before passing a (prepurchase) transaction	ECRM1
	Gojek provides security guarantees during the transaction process (in purchase)	ECRM2
	Gojek always gives a quick response when a problem occurs after the transaction is done (postpurchase)	ECRM3
<b>E-Service Quality</b>	Gojek provides convenience to find what I need (type and price of the product, method of payment, etc.).	ESQ1
	The Gojek always fulfils the promised offer (promos or discounts offered according to the time of payment).	ESQ2
	The Gojek application can execute customer requests accurately.	ESQ3
	The Gojek party protects my privacy	ESQ4
	process of the problem/complaint about my purchase immediately.	ESQ5
	Gojek provides compensation if the service received is	ESQ6

	not satisfactory		
	Gojek provides to resolve my shopping problems	ESQ7	
<b>E-Satisfaction</b>	I feel comfortable when using Gojek	ES1	(Li et al., 2015), (Ranjbarian et al., 2012), (Mang'unyi & Khabala, 2017).
	I am satisfied with the information provided by Gojek	ES2	
	I am satisfied with the Gojek application screen	ES3	
	I am satisfied because Gojek protects my privacy well	ES4	
	I am satisfied with the response/feedback given by Gojek	ES5	
<b>E-Loyalty</b>	I probably won't move to online transportation other than Gojek	EL1	(Huang & Zhou, 2018), (Silalahi et al., 2017), (Bacile, Wolter, Allen, & Xu, 2018), (Mang'unyi & Khabala, 2017)
	If I want to use transportation online, I will choose Gojek	EL2	
	I always say positive things about Gojek to other people	EL3	
	I recommend to colleagues and family to always use Gojek	EL4	

## 4. Result and Discussion

### 4.1. Demography of Respondent

The majority of respondents are women in the age range of 21-31 years and have status as students who have an average income of 1 million per month on average. The intensity of respondents using Gojek per day was recorded at least once, and the most favoured service was Go-food and Go-ride. In general, respondents are classified in the middle-income segment and have mature knowledge and experience of mobile application-based online transportation. Customers can also be said to have made Gojek as the leading daily transportation choice. This demographic and psychographic condition is an essential foundation for marketers e-commerce, especially Gojek, in determining effective and efficient strategies and targets.

**Table 2: Data Demography (N = 167)**

Attributes	Item	F	%
Gender	Men	69	41.8
	Women	98	59.2
Age (years)	< 20 year	71	43.0
	21- 31 year	80	47.4
	> 30 year	16	9.6
Occupation	Student	67	40.6
	Employee	48	29.0
	Entrepreneurs	30	18.1
	others	22	12.3
Income / Per-month (in million rupiah)	< 1 million	72	43.6
	1 - 3 million	56	33.9
	> 3 million	39	22.5
Per-day intensity	1 time	114	69.2
	1-2 times	44	26.6
	> 2 times	7	4.2
The GoJek service is most often used	Go-Ride	48	29.0
	Go-Car	30	18.1
	Go-Food	51	30.9
	Go-Send	23	13.9
	others	13	8.1



#### 4.2. Statistical Result

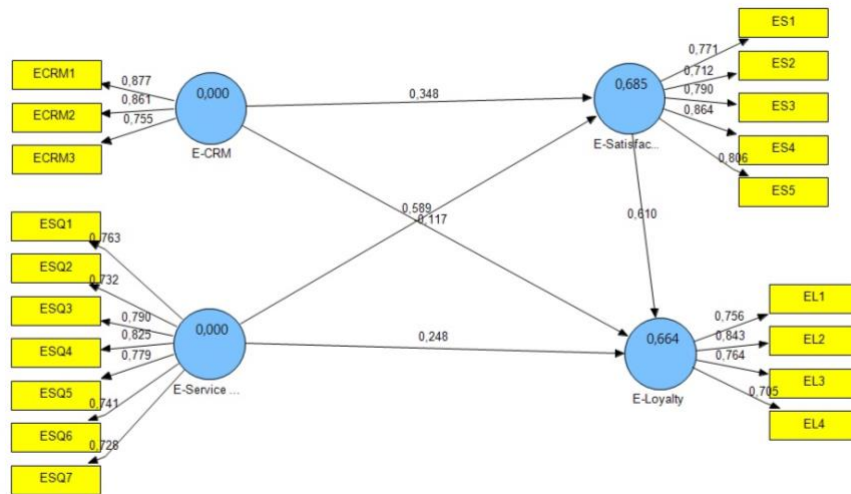
An instrument showed the validity testing criteria if it has a loading factor above 0.7 (Chin, 1998). The test results in table 3 can be seen that all items that measure variables have values greater than 0.7. Thus it can be stated that each item is able to measure latent variables that correspond to these items. The test results in table 3 can also state that each value of the constructed variable has met the specified threshold criteria namely  $AVE > 0.5$ ,  $CR > 0.7$ , and  $\alpha > 0.6$ , so it can be concluded that all items are declared reliable in measuring latent variable. The test results show that value  $Q^2$  endogenous variables, namely e-satisfaction and e-loyalty amounted to 0.703 (see. Table 4.). These results indicate that the diversity of e-satisfaction and e-loyalty variables can be explained by the e-CRM and e-service quality variables of 70.3%.

**Table 3: Discriminant Validity**

	<b>E-CRM</b>	<b>E-Service Quality</b>	<b>E-Satisfaction</b>	<b>E-Loyalty</b>	<b>Std. Dev</b>	<b>Std. Error</b>	<b>T-Stats</b>
ECRM1	<b>0,877</b>	0,653	0,604	0,554	0,023	0,023	38,690
ECRM2	<b>0,861</b>	0,640	0,546	0,464	0,032	0,032	26,891
ECRM3	<b>0,755</b>	0,715	0,546	0,469	0,073	0,073	10,406
ESQ1	0,660	<b>0,763</b>	0,452	0,498	0,092	0,092	7,219
ESQ2	0,576	<b>0,732</b>	0,584	0,522	0,068	0,068	10,740
ESQ3	0,707	<b>0,790</b>	0,589	0,597	0,052	0,052	15,145
ESQ4	0,592	<b>0,825</b>	0,736	0,668	0,040	0,040	20,780
ESQ5	0,667	<b>0,779</b>	0,633	0,555	0,040	0,040	19,452
ESQ6	0,553	<b>0,741</b>	0,602	0,517	0,072	0,072	10,239
ESQ7	0,506	<b>0,728</b>	0,717	0,520	0,048	0,048	15,183
ES1	0,499	0,586	<b>0,771</b>	0,587	0,027	0,027	28,798
ES2	0,426	0,575	<b>0,712</b>	0,674	0,042	0,042	16,927
ES3	0,450	0,693	<b>0,790</b>	0,537	0,044	0,044	18,069
ES4	0,680	0,752	<b>0,864</b>	0,765	0,027	0,027	31,764
ES5	0,606	0,644	<b>0,806</b>	0,588	0,034	0,034	23,788
EL1	0,444	0,494	0,644	<b>0,756</b>	0,029	0,029	26,393
EL2	0,565	0,732	0,736	<b>0,843</b>	0,031	0,031	27,346
EL3	0,438	0,506	0,589	<b>0,764</b>	0,050	0,050	15,319
EL4	0,358	0,504	0,461	<b>0,705</b>	0,083	0,083	8,511

**Table 4: The Goodness of Fit Model**

	<b>Items</b>	<b>AVE</b>	<b>Composite Reliability</b>	<b>Cronbachs Alpha</b>
E-CRM	3	0,6937	0,8712	0,7766
E-Service Quality	7	0,5667	0,9011	0,872
E-Satisfaction	5	0,6242	0,8922	0,8483
E-Loyalty	4	0,5905	0,8517	0,7694
GFI			0.703	



**Figure 2: PLS Analysis**

**4.3. Hypothesis Result**

The results of hypothesis testing for each of the latent variable relationships presented in table 5 also state that e-CRM implemented by GoJek apps has a positive and significant effect on consumer e-satisfaction (sig. P-value  $0.035 < 0.05$ , so that hypothesis H1 = accepted). e-CRM implemented by the GoJek apps as an online transportation mode does not have a significant effect on e-loyalty (sig. p-value  $0.057 > 0.05$ , so that the hypothesis H2 = rejected). E-Service quality has a positive and significant effect on e-satisfaction (sig.p-value  $0.000 < 0.01$  so that the hypothesis H3 = accepted). E-Service quality has a positive and significant effect on e-loyalty (sig.p-value  $0.043 < 0.01$  so that the hypothesis H4 = accepted). e-satisfaction has a positive and significant effect on e-loyalty (sig.p-value  $0.000 < 0.01$  so that the hypothesis H5 = accepted). Variable test results explain that the most dominant influence is shown in the relationship between e-service quality variables on e-satisfaction.

**Table 5: Hypothesis Result**

	Original Sample	Standard Error	T Statistics	P-value	Result
E-CRM → E-Satisfaction	0,348	0,103	3,378	$0.035 < 0.05$	Accepted
E-CRM → E-Loyalty	0,117	0,096	1,218	$0.057 > 0.05$	Rejected
E-Service Quality → E-Satisfaction	0,589	0,094	6,265	$0.000 < 0.01$	Accepted
E-Service Quality → E-Loyalty	0,248	0,122	2,032	$0.043 < 0.05$	Accepted
E-Satisfaction → E-Loyalty	0,611	0,098	6,208	$0.000 < 0.01$	Accepted

**Discussion**

The coefficient value of each predictor shows the positive relationship between e-satisfaction and e-loyalty has the highest estimate or dominant influence, where this indicates that e-loyalty is formed from the experience and knowledge of customers who feel satisfaction when using Gojek. In H1, the analysis test shows that the e-CRM construct is a significant predictor of e-satisfaction on application-based online transportation services, namely Gojek. These results are consistent with, i.e. (Alhaiou, 2011) and (Abdulfattah, 2012). The results of the study show the overall process perceived by customers (prepurchase), (in purchase), and (postpurchase) in the mobile application of online transportation services GoJek plays a role in shaping customer satisfaction. The test results in the second hypothesis indicate that the e-CRM construct does not have a significant effect on e-loyalty, and this result is different from previous studies (Alhaiou, 2011) and (Mang’unyi &

Khabala, 2017). This inconsistency is possible if it is reviewed by the demographic and psychographic conditions of Gojek customers. The majority of respondents are students and employees in their 20s who are vulnerable to move from one brand to another (e.g. Grab or Uber). The GoJek management can maximize features that support consumer comfort, especially services after making a transaction (postpurchase) where this item has the lowest loading factor among other items. Gojek Management, for example, can implement a postpurchase program such as a service centre that can be directly connected with Gojek when a problem occurs after the service is provided. The third hypothesis, where the construct of e-service quality has a positive and significant influence on e-satisfaction and supports research from (Ranjbarian et al., 2012), (Li et al., 2015). These results reveal that customers are satisfied with the Gojek application-based online transportation electronic service. The factor of protection of personal data and transactions is a strong reason for this result and is related to the fact that Gojek can store telephone numbers, home addresses, credit card numbers, and other private information, so security guarantees are considered by respondents to be a significant factor in creating satisfaction. The fourth hypothesis, e-service quality has a positive and significant effect on e-loyalty, and these results are in line with research (Zhao et al., 2012) and (Li et al., 2015). The statement indicates that GoJek customers feel the efficiency in conducting transactions both in terms of time and cost, as well as the availability of information and the smoothness of the transaction, which determines for customers to continue to transact through the availability of adequate system facilities and the guarantee of confidentiality of customer's data. Psychographic data of respondents who registered using Gojek services at least once per day confirms this finding, and with these benefits, customers are sure to return to using Gojek to support their daily activities. The last hypothesis in this study found that a positive and significant relationship between e-satisfaction and e-loyalty on the use of Gojek online transportation. Various study results state the same thing, where e-loyalty is an antecedent of e-satisfaction. GoJek customers will not turn to other brands because they have had a pleasant experience when they place an order. In this particular context, maintaining the consistency of the quality of information; application design; payment method, and guarantees of security and privacy and post-purchase services simultaneously can produce customers with high loyalty.

**Managerial Implication:** This study has an impact on practical implications and new views in the practice of e-commerce, especially in the online transportation industry. The confirmed causality here can at least help managers to understand the predictors of e-satisfaction and customer e-loyalty. The results show that e-CRM predictors and e-service quality play a vital role in the application-based online transportation industry mobile. Based on these results, The Gojek management can focus on improving the quality of services both before customers buy, are buying, and after doing because customer experience in perceiving Gojek is the key to winning the competition and continuing to maintain brand differentiation in the market. That way, customers will reach a high level of loyalty, where they will make repeat purchases and recommend brands to their friends or family.

**Theoretical Implication:** The findings of this study are also expected to enrich theoretical studies on e-commerce, especially application-based transportation, by contributing new thinking to the academic world. The finding of significance and insignificance of exogenous constructs towards endogenous can be used as the basis for further research. However, even though it has been implemented according to the principles of the quantitative approach, this study cannot be separated from several limitations. First, the e-CRM construct cannot directly create e-loyalty for transportation customers online Gojek, where irrelevant results are found between the two constructs. Further research can add control variables (age, gender, and income) in the primary data analysis process. Second, the scope of the research sample is considered not sufficient to



represent the respondents (Gojek customers) as a whole, and this affects the justification of Gojek services. Given the concept of e-commerce is so broad and involves multidisciplinary sciences, then future research can explore or collaborate with other variables to get a more comprehensive understanding, especially e-commerce based mobile applications.

## 5. Conclusion

CRM, Service Quality, Satisfaction and Loyalty implemented comprehensively in cyberspace (the internet) provides a clear picture for academics but also for practitioners and stakeholders who are struggling in the service industry that specifically appoints online transportation business people. Moreover, the implementation of strategies in increasing customer relationship and service quality to support satisfaction and consumer loyalty in cyberspace (internet) is susceptible so that strategic and appropriate efforts are needed so that the implementation of CRM and service quality can run as expected. Consumer privacy security guarantees in cyberspace are the primary reference in addition to prioritizing access to convenience and convenience that should be taken into account to realize society 5.0.

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